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Research Article

Prevalence of Oral Mucosal Lesions Among Elderly Population in Basrah Governorate: A Retrospective Study

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ABSTRACT
Oral health affects the general health in all age groups, however, in the elderly patients the situation is exaggerated by many factors as the systemic diseases and the prolonged use of medications besides the effects of the aging process that deteriorates the cell repair and the immunity, so this study was carried out to evaluate the prevalence of the oral mucosal lesions in elderly patients attending the Basrah college of dentistry. This study was a retrospective study conducted on the recorded pathological reports in the oral pathology department, data of the 55 patients aged >50 years were analyzed statistically using SPSS(version 20). The lesions were more frequent in females 34 (61.8%) while in males there were 21 (38.2%) cases. The age group 50-60 years represented the most frequent group with 24 (43.6%) cases followed by 20(36.4%) aged 60-70 years while patients age ≥70 found to be the least frequent group included 11(20%) of the cases. Tumor-like lesions were the most common lesions seen in 27(49.1%) of the elderly patients followed by the inflammatory lesions which represented 20% of the cases. Malignant lesions were seen in 7(12.7%) patients while benign tumors were found in 1 patient. It was concluded that it is essential to establish a routine oral cavity examination to elderly people who are more venerable to develop oral mucosal lesions that can affect their life quality as these lesions can produce pain,loss of function and it can transform into cancerous lesions that need immediate interventions.

Keywords: Oral, Mucosal lesions, Elderly, Tumor-like, Inflammatory, Vesiculobullous

INTRODUCTION

In all age groups, the oral health affects the life quality and the lesions of the oral mucosa can interfere with the main daily activities of mastication, swallowing, and speech, also can produce other complications such as undesired odors, xerostomia and abnormal sensations (dysesthesia) which impede the individuals activities every day.[1]

The aging population health including the oral health always represents a great world-wise challenge since the tissues in all body organs undergo certain changes, these changes can be exaggerated by many systemic diseases and conditions that exist more frequently in elderly.[2]

In addition to systemic diseases, there are several factors affect the health of the oral tissues in the elderly such as the prolonged use of medications, disabilities physically or mentally, lowering of the immune defense against microbes, certain habits as smoking and alcohol consumption, also the oral mucosa become more permeable to many particles (chemicals, pathogens, and carcinogens) and decrease the ability to regenerate collagen which renders the oral mucosa more vulnerable to develop different lesions. [3]

Oral mucosal lesions in elderly patients represent significant oral conditions besides dental caries and diseases of the periodontium, these lesions cause a decline in the protective role of the oral mucosa, this can expose the aging patients to different chemical substances and pathogenic particles through the oral cavity.[4]

Most of the studies which used to collect information about oral health in elderly patients were based on clinical data only, these data are important but not give a complete picture about the histopathological appearance and nature of such lesions, for this reason, the histopathological examination is necessary to perform correct diagnosis that leads to appropriate management. [5]

For the reasons mentioned previously and because of the increase in the life expectancy

among elderly patients, it is important to obtain a baseline data about the prevalence of oral mucosal lesions in these patients in Iraq generally and in a large governorate with rapid population growth as Basrah especially.

METHODOLOGY

An analysis of the recorded data of the elderly patients was made for the period between 2014 and 2020, these data were recorded in the oral pathology reports for the patients attending the Basrah university of dentistry /department of oral diagnosis. Eighty-three cases from a total of 694 biopsy were recorded for patients aged ≥ 50 years, but only 55 of these cases were with a definitive diagnosis. Also, data about the patient's age, sex, occupation, address, and socioeconomic class were collected.The lesions were sorted depending on the recorded clinical examination findings and the histopathological nature to determined the frequency of the different types of oral lesions in those patients.The recorded data were analyzed using the SPSS software (Version 20).

The oral lesions were classified into:

Malignant lesions (sequamous cell carcinoma, verrucus carcinoma)-

Benign tumors (Osteoma)-

Inflammatory lesions (Lichen planus, Lichenoid drug reaction)-

-Tumor-like lesions (Pyogenic granuloma,Central gaint cell granuloma ,soft tissue lipoma,ameloblastoma, Fibroma and fibroepithelial polyp)

Cystic lesions (Radicular cyst)-

Vesiculobullous diseases(Bullous pemphigoid)-

White lesions (leukoplakia)-

Ulcerative lesions(Erosive lichen planus)-

Salivary glands diseases(Mucocele, polymorphus low grade adenocarcinoma)-

Others (keratoacanthoma, submucosal fibrosis)-

RESULTS

Among 694 biopsy for oral mucosal lesions, 55 cases were for elderly patients aged ≥50 years ,these lesions were more frequent in females 34 (61.8%) while in males there was 21 (38.2%) cases. The age group 50-60 years represented the most frequent group with 24 (43.6%) cases followed by 20(36.4%) aged 60-70 years while patients age ≥70 found to be the least frequent group included 11(20%) of the cases as shown in table (1).

Table 1 : Distribution of the age groups in the study sample

Age	Frequency	Percentage
60-50	24	43.6%
70-60	20	36.4%
70≤	11	20%
Total	55	100%

Diagnosis

In this study ,tumor-like lesions was the most common lesions seen in 27(49.1%) of the elderly patients followed by the inflammatory lesions which represented 20% of the cases.Malignant lesions were seen in 7(12.7%) patients while benign tumors were found in 1 patient. Other lesions are found as shown in table (2) and figure (1).

Table 2: Distribution of the oral lesions according to Diagnosis

Lesion	Frequency	Percent
Malignant lesions	7	12.7
Benign tumors	1	1.8
Inflammatory lesions	11	20.0
Tumor-like lesions	27	49.1
cystic lesions	2	3.6
Vesiculobullous diseaes	1	1.8
white lesions	1	1.8
ulcerative lesions	1	1.8
Salivary glands diseases	2	3.6
Others	2	3.6

Total	55	100.0

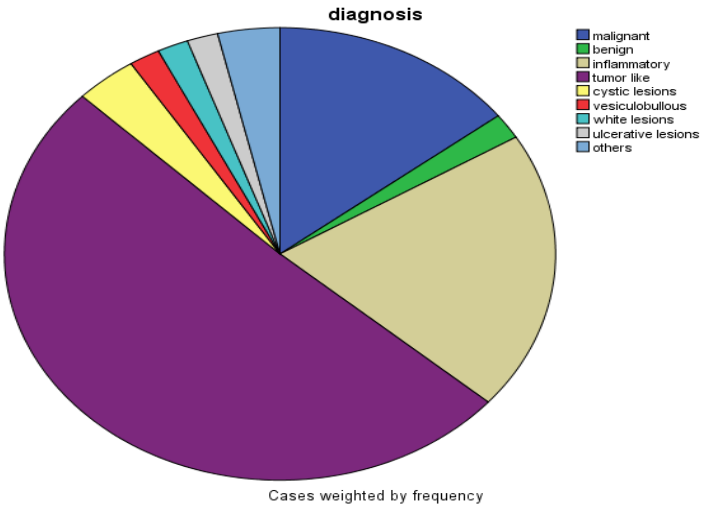

Fig.1: Distribution of the oral lesions according to Diagnosis

Age, Gender and Diagnosis

The lesions were distributed in both males and females at different age groups as seen in table (3)

Table 3: Distribution of lesions in different age groups in both sexes

diagnosis	Males			Females			Total
	50-60 y	60-70 y	≥70 y	50-60 y	60-70 y	≥70 y	
Malignant lesions	1(1.8%)	1(1.8%)	1(1.8%)	0	2(3.6%)	2(3.6 %)	7(12.7%)
Benign tumors	0	0	0	1(1.8%)	0	0	1(1.8%)
Inflammatory lesions	2(3.6%)	3(5.4%)	1(1.8%)	2(3.6%)	2(3.6%)	1(1.8 %)	11(20%)
Tumor- like lesions	3(5.4%)	3(5.4%)	4(7.2%)	10(18.1%)	6(10.9)%	1(1.8 %)	27(49.1%)
Cystic lesions	0	0	0	1(1.8%)	1(1.8%)	0	2(3.6%)
Vesiculobullous diseases	0	0	0	0	1(1.8%)	0	1(1.8%)
White lesions	1(1.8%)	0	0	0	0	0	1(1.8%)
Ulcerative lesions	0	0	0	1(1.8%)	0	0	1(1.8%)
Salivary glands diseases	0	0	0	2(3.6%)	0	0	2(3.6%)
Others	0	0	1(1.8%)	0	1(1.8%)	0	2(3.6%)
Total	7(12.6%)	7(12.6%)	7(12.6%)	17(30.7%)	13(23.5%)	4(7.2 %)	55(100%)

DISCUSSION

The total number of biopsies received in Basrah dental college/ department of oral pathology was 694, while 55 of these cases were for elderly patients aged ≥50 years, these lesions were more frequent in females 34 (61.8%) while in males there were 21 (38.2%) cases, this can be explained by the death rate among males at a younger age in Iraq is higher than females beside that the females are more concerned about their oral health, this was not inconsistent with the previous study done by Bozdemir *et al.*,2019 [6] who reported that their study included 375 men and 334 women, while in their study the younger age group was the more prominent group since the age groups:60–64 (36.4%), 65–69 (31.6%), and ≥70 years of age (32%) as seen in this study since in Iraq/Basrah community consider that the examination and treatment of the oral lesions in the older age population are not of a major importance compared to the systemic diseases that found in most of them.

The tumor-like lesions were the most common lesions found in the elderly patients followed by

the inflammatory lesions and the malignant lesions in this study, but this distribution of lesions according to diagnosis varies among studies because of the different manners followed in the selection of the sample included and different mean age and habits selected in each study, this variation was mentioned in Toum et al.,2018 who reported many previous studies that handled this subject, as in the Caucasian population the primary lesion was coated/hairy tongue in 16.7% of the subjects, lingual varices (16.3%), secondary herpes lesions (8.1%), aphthous ulcers (7.9%), Fordyce granules (7.2%), frictional keratosis (5%), candidiasis(4.9%), fibroepithelial hyperplasia (4.6%), squamouspapilloma (3.8%), traumatic ulcers (3.7%), leukoplakia(3.2%), fissured tongue (3.2%), hemangiomas (2.7%), and morsicatio buccarum (2.5%), however in geriatric Indian the oral lesions that had been seen more frequently were smoker's palate (43%), denture stomatitis (34%), oral submucous fibrosis (30%), frictional keratosis (23%), leukoplakia (22%), and pyogenic granuloma (22%). [7]

Vesiculobullous diseases in this study were found only in female patients since these conditions are more predominant in females and that was in agreement with HAYES & CHALLACOMBE ,2016 who mentioned that

mucous membrane pemphigoid and pemphigus Vulgaris are the most common Vesiculobullous diseases affecting the oral cavity and Both are autoimmune diseases affecting females more than males at a peak age of over 60 years. 8

The radicular cyst was the cystic lesion found in the study sample this agreed with the study that reported by Pechalova and Pavlov, 2012 9 who mentioned that the radicular cyst was the most common type of cysts found in the elderly patients in their study, this can be explained by the presence of retained roots for destructed teeth as a result of carries or periodontal diseases that occur at a high rate in those patients and these retained roots are going to inflamed and trigger a sequence of cystic changes in the jawbones.

This was a retrospective study limited by the recorded information about the patients and the histopathological examination of the biopsies with no further information about the site of the lesion, the signs, and symptoms, or any other data about the patients, so further studies can be performed on a larger group of patients concerning their oral habits, occupation, socioeconomic class and their region of residency, also a study can be carried out about the distribution of the lesions in different sites of the mouth in the elderly patients.

CONCLUSION

"Oral health is essential to general health and quality of life."For this reason it is important to establish a routine oral cavity examination in all age groups with a special attention to elderly people who are more venerable to develop oral mucosal lesions that can affect their life quality as these lesions can produce pain ,loss of function and it can transform into cancerous lesions that need immediate interventions.

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